side has a long flange P^8, that extends longitudinally of the pawl. The shaft O is made in two sections assembled endwise. The left-hand section of the shaft carries the gear O', and the right-hand shaft-section O^3 is tubular and bears the operating-crank O^2, that at its inner end is provided with an externally-threaded lug O^4, that engages the correspondingly-internally-threaded outer end of shaft-section O^3. The right-hand shaft-section O^3 is supported from the right-hand end plate K. The left-hand shaft-section $O^\times$ is supported from the left-hand end plate K and supported at the right-hand end from the left-hand end of shaft-section O^3 by extending into the said left-hand end of section O^3, that to a limited extent is revoluble upon shaft-section $O^\times$. Operative connection between the two shaft-sections is made by two flanges or arms O^5 O^5, formed upon opposite sides, respectively, of the inner or left-hand end of shaft-section O^3. One of the members O^5 overlaps the outer side of the flange P^8 of one of the pawls and the other member O^5 overlaps the outer side of the flange P^8 of the other pawl, and the arrangement of parts is such, therefore, that the turn of the shaft-section O^3 in the one or the other direction will cause its arms or flanges O^5 to actuate the pawls toward each other against the action of the pawl-engaging springs and out of engagement with contact Q and turn the left-hand shaft-section by virtue of the operative connection thus established between the two shaft-sections by members O^5 and pawls P^8. The gear-bearing shaft-section is prevented from outward endwise displacement by a collar O^6, fixed upon the said shaft-section at the right-hand end of the shaft-supporting box formed upon the left-hand end plate K, and the crank-bearing shaft-section is prevented from outward endwise displacement by a collar O^7, fixed upon the said last-mentioned shaft-section at the left-hand end of the shaft-supporting box formed upon the right-hand end plate K.

The arrangement of the stationary contact Q and the movable contacts P^2 P^2 is of course such that at all times at least one of the said movable contacts in the latter's normal position engages the stationary contact.

Two suitably-arranged bolts S S and nuts S', mounted upon the shanks of the bolts, and plates or washers S^2, interposed between the bolt-heads and the magnets and between the nuts and the magnets are employed in drawing the limbs of the magnets together and against the pole-pieces. The two bolts extend through the different outer magnets, respectively, next to the central magnet. The bolt-holes *d* in the magnets are formed by recesses made in the said edges of the magnets, as shown in dotted lines, Fig. II, and the washers or plates S^2 extend across and act upon the central magnet.

What I claim is—

1. In a magneto-electric generator, the combination with the magnets and the pole-pieces; of contact-plates between the pole-pieces and the magnets, which plates have sections engaging the magnets and having other sections engaging the pole-pieces, substantially as set forth.

2. In a magneto-electric generator, a contact-plate snugly interposed between the outer side of each pole-piece and the adjacent portions of the permanent magnets, and consisting of a sheet or plate of magnetic material, and cut or stamped or bent into the shape required to form straight sections engaging the magnets and curved sections conforming to and engaging the outer sides of the pole-pieces, substantially as set forth.

3. In a magneto-electric generator, the combination with the two pole-pieces having arc-shaped or curved portions arranged at opposite sides, respectively, of and extending partially around the armature's sweep, and the magnets straddling the pair of pole-pieces; of a contact-plate snugly interposed between the said central portion of each pole-piece and the magnets, and having straight sections engaging the magnets and arc-shaped or curved sections formed between the straight sections and engaging the pole-pieces, substantially as set forth.

4. In a magneto-electric generator, the combination with the two arc-shaped or curved pole-pieces arranged at opposite sides, respectively, of the armature's sweep, and the magnets straddling the pair of pole-pieces; of a contact-plate interposed between the outer side of each pole-piece and the magnets, and having sections engaging and conforming to the inner surfaces of the magnets above and below the central part of the arc-shaped or curved portions of the pole-piece and having other sections partially embracing and engaging the outer sides of the pole-pieces above and below the said central part of the pole-piece, substantially as set forth.

5. In a magneto-electric generator, a contact-plate for interposition between the outer side of a pole-piece and the adjacent portions of the permanent magnets and consisting of a plate composed of magnetic metal or material and cut and stamped or bent into the shape required to form sections partially embracing the pole-piece above and below the central portion of the armature-surrounding portion of the pole-piece, and other sections conforming to and engaging the magnets above and below the said central portion of the pole-piece, substantially as set forth.

6. In a magneto-electric generator, a contact-plate interposed between the outer side of a pole-piece and the adjacent portion of the permanent magnets, and having two lugs or flanges overlapping and engaging the opposite side edges, respectively, of the pole-piece, substantially as and for the purpose set forth.

7. In a magneto-electric generator, a contact-plate interposed between a pole-piece and